Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A backup server for enabling a data communications network to recover from a local server failure, the backup server comprising:

an information packet receiver responsive to the local server failure, the information packet receiver receiving from a memory associated with a network access server (NAS) an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the local server fails, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server; and

a parser for reconstructing the call information from the information packet, such that the backup server maintains the ongoing call to the data communications network.

2. (Previously Presented) A backup server according to claim 1, wherein the call information comprises server-state attribute (SSA) having an attribute/value pair that can be parsed into a plurality of separate data entries.

3. (Previously Presented) A backup server according to claim 1, wherein the information packet further comprises a plurality of aggregated data elements from a call attribute table.

4. (Previously Presented) A backup server according to claim 3, wherein the plurality of aggregated data elements are separated by the parser for reconstructing the call information from the information packet.

5-8. (Cancelled)

9. (Previously Presented) A local server for enabling a data communications network to recover from a failure of the local sever, the local server comprising:

an encoder for generating an information packet associated with an ongoing call placed by the call-in user via a network access server (NAS), the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server, the information packet containing call information for maintaining connection of the ongoing call if the local server fails; and

a sender for transmitting the information packet from the encoder to a memory associated with the NAS, the information packet being stored in the memory to be available to the backup server if the local server fails.

10. (Previously Presented) A local server according to claim 9, wherein the call information comprises server-state attribute (SSA) having an attribute/value pair that can be parsed into a plurality of separate data entries.

11. (Previously Presented) A local server according to claim 9, wherein the information packet further comprises a plurality of aggregated data elements from a call attribute table.

12. (Previously Presented) A local server according to claim 11, wherein the plurality of aggregated data elements are separated by the parser for reconstructing the call information from the information packet.

13. (Previously Presented) A system for maintaining a call placed by a call-in user to a data communications network, the system comprising:

a memory associated to a network access server (NAS), the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to a local server;

an encoder associated with the local server for generating an information packet associated with an ongoing call placed by the call-in user via the NAS, wherein the information packet containing call information for maintaining connection of the ongoing call if the local server fails;

a sender for transmitting the information packet from the encoder to a memory associated with the NAS, the information packet being stored in the memory;

a call coupler associated with the NAS for coupling the call to the local server if the local server does not fail, and for coupling the call to the backup server if the local server fails;

an information packet forwarder for transmitting the information packet from the associated memory to the backup server if the local server fails; and

a parser associated with the backup server for reconstructing the call information from the information packet such that the backup server can recover the call information and serve the call without disconnecting the user from the network.

14. (Previously Presented) A system according to claim 13, wherein the information packet forwarder comprises:

an information packet requester associated with the backup server for requesting the information packet from the memory associated with the NAS in response to the call received from the NAS, if the call information is not available to the backup server.

15. (Previously Presented) A system according to claim 14, wherein the information packet requester requests the information packet from the memory if the call information is not available to the backup server.

16. (Previously Presented) A system according to claim 14, wherein the information packet forwarder further comprises:

an information packet sender associated with the NAS, for transmitting the information packet in response to a request from the information packet requester.

17. (Previously Presented) A network access server (NAS) for maintaining a call placed from a call-in user to a data communications network, the NAS comprising:

a receiver for receiving an information packet from a local server, the information packet associated with an ongoing call placed to the NAS by the call-in user, the information packet containing context data of the ongoing call for maintaining connection of the ongoing call;

an associated memory for storing the information packet;

a failure detector for determining if a failure of a local server has occurred; and

a sender for transmitting the information packet from the associated memory to ~~the~~ a backup server if the local server failure has occurred, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server.

18. (Previously Presented) A NAS according to claim 17, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair that can be parsed into a plurality of separate data entries.

19. (Previously Presented) A NAS according to claim 17, wherein the information packet further comprises a plurality of aggregated data elements from a call attribute table.

20. (Previously Presented) A server backup system for maintaining an ongoing call placed by a call-in user to a network, the system comprising:

a backup server connected to the network, the backup server being capable of servicing the call;

an encoder associated with a server servicing the call, the encoder generating an information packet associated with an ongoing call placed by the call-in user via a network access server (NAS) capable of coupling the call from the user to the network and providing a network connection to the server, the information packet containing call information for maintaining connection of the ongoing call;

a sender associated with the server, the sender transmitting the information packet to a memory associated with the NAS, the memory storing the information packet;

a call coupler associated with the NAS, the call coupler rolling over the call to the backup server if the server fails;

an information packet requester associated with the backup server, for requesting the information packet from the memory associated with the NAS in response to the call received from the NAS, if the call information is not available to the backup server; and

a parser associated with the backup server, for reconstructing the call information from the information packet.

21. (Previously Presented) A server backup system according to claim 20, wherein the call information comprises server-state attribute data having an attribute/value pair that can be parsed into a plurality of separate data entries.

22. (Previously Presented) A server backup system according to claim 20, wherein the information packet further comprises a plurality of aggregated data elements from a call attribute table.

23. (Previously Presented) A server backup system according to claim 22, wherein the plurality of aggregated data elements of the information packet are separated by the parser for reconstructing the call information from the information packet.

24. (Previously Presented) A server backup system according to claim 20, wherein the server is a resource pool manager server (RPMS).

25. (Cancelled)

26. (Previously Presented) A server backup system according to claim 20, further comprising:

a failure detector associated with the NAS, for detecting the failure of the server.

27-29. (Cancelled)

30. (Previously Presented) A server backup system for maintaining an ongoing call placed by a call-in user to a network, the system comprising:

a first server connected to the network for servicing the call;

a second server connected to the network for servicing the call if the first server fails; and

a network access server (NAS) capable of coupling a call placed by a call-in user to the network and providing a network connection to a server, the NAS coupling the call from the call-in user to the first server if the first server does not fail, and coupling the call to the second server if the first server fails, the NAS including a memory associated therewith,

wherein the first server comprises:

an encoder for generating an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the first server fails; and

a sender for transmitting the information packet from the encoder to the memory associated with the NAS, the memory storing the information packet, and

wherein the second server comprises:

an information packet requester for requesting the information packet from the memory in response to the call received from the NAS, if the call information is not available to the second server; and

a parser for reconstructing the call information from the information packet.

31. (Previously Presented) A server backup system according to claim 30, wherein the NAS further comprises:

a failure detector for detecting the failure of the second server.

32. (Previously Presented) A server backup system according to claim 30, wherein the first server is a resource pool manager server (RPMS) and the second server is a backup RPMS.

33-51. (Canceled)

52. (Previously Presented) A NAS according to claim 17, wherein the sender transmits the information packet in response to a request from the backup server.

53-62. (Cancelled)

63. (Previously Presented) A method performed by a backup server for enabling a data communications network to recover from a local server failure, the method comprising:

receiving an information packet from a memory associated with a network access server (NAS) in response to a local server failure, the NAS capable of coupling a call placed from a call-in user to the data communications network and providing a network

connection to a local server, the information packet being associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the local server fails; and

reconstructing the call information from the information packet so as to maintain the ongoing call to the data communications network.

64. (Previously Presented) A method according to claim 63, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the reconstructing comprising:

parsing the SSA data into a plurality of separate data entries.

65. (Previously Presented) A method according to claim 64, further comprising:

petitioning to the NAS for the information packet after the NAS requests the call information; and

sending the call information to the NAS after completing the reconstructing.

66. (Previously Presented) A method performed by a local server for enabling a data communications network to recover from a failure of the local sever, the method comprising:

generating an information packet associated with an ongoing call placed by the call-in user via a network access server (NAS), the information packet containing call information for maintaining connection of the ongoing call if the local server fails, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server; and

transmitting the information packet to the memory associated with the NAS, the information packet being stored in the memory to be available to the backup server if the local server fails.

67. (Previously Presented) A method according to claim 66, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the method further comprising:

encoding a plurality of aggregated data elements from a call attribute table representing the SSA data; and

delimiting information packet into an attribute data string and a value data string.

68. (Previously Presented) A method for maintaining a call placed by a call-in user to a data communications network, the method comprising:

generating an information packet associated with an ongoing call placed by the call-in user via a network access server (NAS), wherein the information packet containing call information of an ongoing call for maintaining connection of the call if the local server fails;

transmitting the information packet to the memory associated with the NAS, the information packet being stored in a memory associated with the NAS, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server;

coupling the call to the local server if the local server does not fail, and coupling the call to the backup server if the local server fails;

transmitting the information packet from the memory associated with NAS to the backup server if the local server fails; and

reconstructing the call information from the information packet such that the backup server can recover the call context and serve the ongoing call without disconnecting the user from the network.

69. (Previously Presented) A method performed by a network access server (NAS) for maintaining a call placed from a call-in user to a data communications network the method comprising:

receiving an information packet from a local server for servicing the call, the information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server;

storing the information packet in a memory associated with the NAS;

determining if a failure of the local server has occurred; and

transmitting the information packet from the associated memory to the backup server if the local server failure has occurred.

70. (Previously Presented) A method according to claim 69, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair that can be parsed into a plurality of separate data entries.

71. (Previously Presented) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method to be performed at a backup server for enabling a data communications network to recover from a local server failure, the method comprising:

receiving an information packet from a memory associated with a network access server (NAS) in response to a local server failure, the NAS capable of coupling a call placed from a call-in user to the data communications network and providing a network connection to a local server, the information packet being associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the local server fails; and

reconstructing the call information from the information packet so as to maintain the ongoing call to the data communications network.

72. (Previously Presented) A program storage device according to claim 71, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the reconstructing comprising:

parsing the SSA data into a plurality of separate data entries.

73. (Previously Presented) A program storage device according to claim 72, further comprising:

petitioning to the NAS for the information packet after the NAS requests the call information; and

sending the call information to the NAS after completing the reconstructing.

74. (Previously Presented) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method to be performed at a local server for enabling a data communications network to recover from a failure of the local sever, the method comprising:

generating an information packet associated with an ongoing call placed by the call-in user via a network access server (NAS), the information packet containing call information for maintaining connection of the ongoing call if the local server fails, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server; and

transmitting the information packet to the memory associated with the NAS, the information packet being stored in the memory to be available to the backup server if the local server fails.

75. (Previously Presented) A program storage device according to claim 74, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the method further comprising:

encoding a plurality of aggregated data elements from a call attribute table representing the SSA data; and

delimiting information packet into an attribute data string and a value data string.

76. (Previously Presented) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method to be performed at a network access server (NAS) for maintaining a call placed from a call-in user to a data communications network, the method comprising:

receiving an information packet from a local server for servicing the call, the information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails, the NAS capable of coupling a call placed from the call-in user to the data communications network and providing a network connection to the local server;

storing the information packet in a memory associated with the NAS;

determining if a failure of the local server has occurred; and

transmitting the information packet from the associated memory to the backup server if the local server failure has occurred.

77. (Previously Presented) A program storage device according to claim 76, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair that can be parsed into a plurality of separate data entries.

78. (Previously Presented) An apparatus for enabling a data communications network to recover from a local server failure, the data communications network including a network access server (NAS) capable of coupling a call placed from a call-in user to the data communications network and providing a network connection to the local server, the NAS having a memory associated therewith, the apparatus comprising:

means for receiving an information packet from the memory associated with the NAS in response to the local server failure, the information packet being associated with an ongoing call placed by the call-in user via the NAS, the information packet containing

call information for maintaining connection of the ongoing call if the local server fails; and

means for reconstructing the call information from the information packet so as to maintain the ongoing call to the data communications network.

79. (Previously Presented) An apparatus according to claim 78, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the means for reconstructing comprising:

means for parsing the SSA data into a plurality of separate data entries.

80. (Previously Presented) An apparatus according to claim 79, further comprising:

means for petitioning to the NAS for the information packet after the NAS requests the call information; and

means for sending the call information to the NAS after completing the reconstructing.

81. (Previously Presented) An apparatus for enabling a data communications network to recover from a failure of the local sever, the data communications network including a backup server and a network access server (NAS), the NAS capable of coupling a call placed from a call-in user to the data communications network and providing a network connection to the local server, the NAS having a memory associated therewith, the apparatus comprising:

means for generating an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the local server fails; and

means for transmitting the information packet to the memory associated with the NAS, the information packet being stored in the memory to be available to the backup server if the local server fails.

82. (Previously Presented) An apparatus according to claim 81, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair, the apparatus further comprising:

means for encoding a plurality of aggregated data elements from a call attribute table representing the SSA data; and

means for delimiting information packet into an attribute data string and a value data string.

83. (Previously Presented) An apparatus for maintaining a call placed from a call-in user to a data communications network, the data communications network including a local server for servicing the call, and a backup server capable of servicing the call, the apparatus capable of coupling the call to the data communications network and providing a network connection to the local server, the apparatus comprising:

means for receiving an information packet from the local server, the information packet associated with an ongoing call placed by the call-in user via the apparatus, the information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails;

means for storing the information packet in a memory associated with the apparatus;

means for determining if a failure of the local server has occurred; and

means for transmitting the information packet from the associated memory to the backup server if the local server failure has occurred.

84. (Previously Presented) An apparatus according to claim 83, wherein the call information comprises server-state attribute (SSA) data having an attribute/value pair that can be parsed into a plurality of separate data entries.

85. (Previously Presented) A backup server according to claim 1, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.

86. (Cancelled)

87. (Previously Presented) A local server according to claim 9, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.

88. (Previously Presented) A system according to claim 13, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.

89. (Previously Presented) A NAS according to claim 17, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.

90. (Previously Presented) A server backup system according to claim 20, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.

91. (Previously Presented) A server backup system according to claim 30, wherein the call information comprises at least one of:

Dialed Number Information Service (DNIS) address;

call type;

Calling Line Identification (CLID); and

service accounting information.